RECORD OF DECISION

for the

Proposed Issuance of a Section 10(a)(1)(B) Incidental Take Permit

to

Buckeye Wind LLC

for the

Buckeye Wind Power Project Habitat Conservation Plan

U.S. Fish and Wildlife Service

July 17, 2013

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Introduction

This Record of Decision (ROD) was prepared by the U.S. Fish and Wildlife Service (Service) in compliance with to the National Environmental Policy Act of 1969, as amended (NEPA). The purpose of this ROD is to document the decision of the Service in response to an application for an Incidental Take Permit (Permit) (TE66315A) for the take of species listed under the Endangered Species Act of 1973, as amended (Act). The Service has based its decision on the draft Habitat Conservation Plan (DHCP), the final Habitat Conservation Plan (FHCP), the draft Environmental Impact Statement (DEIS), the final Environmental Impact Statement (FEIS), the Implementing Agreement (IA), the Statement of Findings, and the Biological Opinion (BO). Buckeye Wind LLC's (Applicant) Permit application and supporting HCP and IA were submitted to the Service pursuant to section 10(a)(1)(B) of the Act.

This ROD: (1) documents the Service decision and presents the rationale for the decision; (2) identifies the alternatives considered in the Environmental Impact Statement (EIS) in reaching the decision; and (3) states whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not (40 CFR§ 1505.2).

The Service proposes to issue a Permit to the Applicant under the authority of section 10(a)(1)(B) and section 10(a)(2) of the Act for a period of 30 years. Documents used in the preparation of this ROD include the following:

- Draft Buckeye Wind Power Project Habitat Conservation Plan (HCP) (Stantec 2012),
- Final Buckeye Wind Power Project Habitat Conservation Plan (HCP) (Stantec 2013),
- Draft Environmental Impact Statement for the Buckeye Wind Power Project Habitat Conservation Plan (DEIS) (Service 2012),
- Final Environmental Impact Statement for the Buckeye Wind Conservation Plan (FEIS) (Service 2013a),
- Final Implementing Agreement (IA) (Buckeye Wind 2013), and
- Service's Biological Opinion on the Permit application (Service 2013b).
- Service's Statement of Findings on the Permit application (Service 2013c).

All of these documents are incorporated by reference.

Project Description

Purpose and Need

The purpose for the proposed action is to:

- Respond to Buckeye Wind LLC's application for a Permit for the federally endangered Indiana bat related to Project activities that have the potential to result in take, pursuant to the provisions of Section 10(a)(1)(B) of the Act, and its implementing regulations (50 C.F.R. part 17.22(b)(1)) and policies.
- Protect, conserve and enhance the Indiana bat and its habitat for the continuing benefit of the people of the United States (U.S.).
- Provide a means and take steps to conserve the ecosystems depended on by the Indiana bat.
- Ensure the long-term survival of the Indiana bat through protection and management of the species and its habitat.
- Ensure compliance with the Act, NEPA, and other applicable Federal laws and Regulations

The need for the proposed action is based on the potential that activities proposed by Buckeye Wind LCC could result in the incidental take of Indiana bats, and thus the need for a Permit. Commercial wind facilities have been shown to cause high numbers of bat mortalities in many locations. There is a need to ensure that take of Indiana bats is avoided and minimized to the maximum extent practicable and to ensure that the impact of any remaining take is fully mitigated. There is also a need to protect the habitat of Indiana bats including their maternity trees, swarming areas near hibernacula, and nearby foraging and roosting habitat.

Covered Activities

The activities (Covered Activities) that will be covered under the Permit are those activities associated with the construction, operation, maintenance, and decommissioning of the Buckeye Wind Power Project (Project). The Project proposes to construct and operate a maximum of 100 wind turbines and associated facilities for a period of 30 years in eastern Champaign County, Ohio. The Project will consist of wind turbines, associated access roads, an underground and aboveground electrical collector system, a substation for connection of the wind turbines to the local transmission system, four permanent meteorological towers, and an operations and maintenance building. In addition, up to four temporary construction staging areas will be created during development. Project facilities and infrastructure will be placed on private land via long-term easement agreements between the Applicant and respective landowners.

Covered Lands

The Project would occur on approximately 80,051 acres of land within portions of Union, Wayne, Urbana, Salem, Rush, and Goshen Townships in Champaign County, Ohio. A relatively small portion of that land, approximately 0.16 percent (129.8 acres), will be permanently occupied by the Project facilities. Beyond the approximate 129 acres of occupied area, the Project will not impact or change the existing land use which is primarily agriculture. Covered lands also include the areas within which mitigation actions will occur. Mitigation will involve forest habitat preservation, restoration, and enhancement on 217 acres of land within 7 miles of a Priority 2 Indiana bat hibernaculum. .

Conservation Measures

The FHCP describes the impacts of take associated with the Applicant's Covered Activities and includes measures to avoid, minimize, mitigate, and monitor the impacts of incidental take on the Indiana bat. The Applicant will be mitigating for take and associated impacts through permanent preservation, enhancement, and restoration of suitable Indiana bat habitat within 7 miles of a Priority 2 Indiana bat hibernaculum in Ohio. Selection of this mitigation measure is supported by the information in the Draft Indiana bat Recovery Plan (Service 2007). Mitigation will occur on private lands and will be permanently protected by a conservation easement held by a third-party conservation organization. Section 6.3 of the FHCP describes the details of compensatory mitigation and its implementation. The FHCP also includes numerous avoidance and minimization measures as well as adaptive management, as described in section 6.0 of the FHCP, which will limit the take of the Indiana bat. Further, the Applicant will fund voluntary conservation measures involving researching Indiana bat and wind power interactions and/or Indiana bat migration.

Alternatives

Seven alternatives were identified during preparation of the EIS. Several alternatives were eliminated from further analysis because they did not meet the stated goals and objectives of the Service or the Applicant. The three alternatives considered but not analyzed in detail include the following: (1) An incidental take permit with a shorter duration; (2) reduced number of turbines; and (3) an alternative location for the Buckeye Wind Project in Ohio.

Four alternatives were carried forward and analyzed in the DEIS and FEIS. Following is a brief description of the no action as well as the three action alternatives.

Proposed Action

The Proposed Action is the Service's issuance of a Section 10 Permit to the Applicant for those activities associated with the construction, operation, maintenance, and decommissioning of the

Project. The Project would be one of the first large-scale commercial wind powered electric generation facilities in Ohio, and may be among the first wind facilities in the nation to operate with under a Permit for the incidental take of the Indiana bat. The Project would be located within an approximately 32,395-ha (80,051-acre) Action Area that includes portions of Union, Wayne, Urbana, Salem, Rush, and Goshen Townships (Figure 1-1 in the FHCP). The Project Area includes those sites within the Action Area where Project components would be located, plus a 305-m (1,000-ft) buffer or setback from the turbines. The permanent footprint (the area of permanent disturbance) for the Project would be a maximum of 52.2 ha (128.9 ac), or 0.16 percent of the Action Area.

The Project would consist of up to 100 turbines, each with a capacity rating of 1.6 to 2.5 MW, which would result in a total generating capacity of up to 250 MW for the Project. In addition to the 100 turbines, the Project would include construction of access roads, underground and overhead electrical collection lines, a substation, up to 4 temporary construction staging areas, 4 permanent meteorological (MET) towers, and an operation and maintenance (O&M) facility. The Applicant expects the Project to operate at an average annual capacity factor of approximately 30 percent, resulting in approximately 657,000 MWh of electricity generation per year. The energy generated by the Project would collect to a new electric substation in Union Township in Champaign County. The Applicant expects to remain as the owner and operator for both construction and operation of the Project. Figures 1-1 and 1-2 indicate the locations for 52 of the possible 100 turbines; locations for the remaining 48 turbines have yet to be determined, however the Applicant provided a reasonable worst-case scenario for placement of the additional 48 turbines based on habitat category.

Under the Proposed Action, operation of each turbine within the Project will be modified. Operational adjustments will dictate that turbines are feathered until a designated cut-in speed is reached. The cut-in speed of each turbine will be based on turbine location in relationship to suitable Indiana bat habitat and the season of Indiana bat activity. The goal of the modified operations is to avoid and minimize take of Indiana bats to the maximum extent practicable, based on best available science and site-specific data.

Post-construction bat and bird mortality monitoring will occur to document compliance with the Permit terms throughout the life of the Project, and adaptive management based on post-construction monitoring results will be implemented to maintain take at permitted levels.

Alternative A – Maximally Restricted Operations Alternative

Alternative A would require more operational restrictions than those described under the proposed action alternative which would eliminate take of Indiana bats. Accordingly, a Permit would not be necessary and the HCP, associated conservation measures and mitigation would not be implemented.

Alternative A contains the following elements:

- Project components and associated infrastructure identical to those described in the HCP; and
- Operational adjustments would be used to eliminate take of Indiana bats by having all 100 turbines non-operational from sunset to sunrise during the entire period over which Indiana bats are active (April 1 through October 31).

Alternative B – Minimally Restricted Operations Alternative

This alternative would require less operational restrictions than those described under the proposed action alternative. It would include implementation of the HCP and associated post-construction monitoring and adaptive management as described in the FHCP. While this alternative would allow for increased operation of the wind facility and generation of more clean energy to displace other carbon-based energy sources, it would result in a take of approximately 12 Indiana bats per year, totaling 300 Indiana bats over the 25-year operational life of the Project.

Alternative B contains the following elements:

- Project components and associated infrastructure identical to those described in the HCP.
- Operational adjustments would be used to reduce take of Indiana bats by feathering all 100 turbines until a cut-in speed of 5.0 m/s (11 mph) is reached during the fall migration period (August 1 through October 31), which has consistently been documented to be the window of highest risk for mortality of *Myotis* and other bat species based on results from post-construction monitoring studies. This cut-in speed would be applied to the turbines for the hours of the night during which *Myotis* bats have been documented to be most active (i.e., the first one to six hours after sunset). Further, turbines would be feathered until the manufacturer's cut-in speed is reached from one-half hour before sunset to one-half hour after sunrise from April 1 to July 31.
- Additional mitigation would be required to offset the increased take of Indiana bats. Using the "Acres of Mitigation Calculation" method described in Section 6.3.1 of the HCP, 194.0 ha (479.4 ac) would be needed to mitigate for the take of 300 Indiana bats.

Alternative C – No-Action Alternative

Under the No-Action Alternative, the Service would not issue a Permit and the Project would not be developed. The No-Action Alternative would avoid the potential take of the Indiana bat, but would also not provide a clean source of electricity, offset carbon emissions, or contribute to the Nation's renewable energy portfolio. The No-Action Alternative would also not provide the conservation, research, and advanced knowledge of bat- and bird-wind interactions that could help the overall health of the Indiana bat and other bat and bird species.

The No-Action Alternative is the baseline against which the effects of the action alternatives are compared.

Public Involvement

Public scoping for the NEPA analysis was first initiated in the form of a Notice of Intent (NOI) to conduct a 30-day scoping period for a NEPA decision, which published in the Federal Register on January 29, 2010 (75 FR 4840-4842). Formal scoping began on May 26, 2010 when the NOI to prepare a DEIS was published in the Federal Register (75 FR 29575-29577). The Service also conducted outreach through press releases and public notification to inform interested parties or those potentially affected by the Proposed Action and to request comments on the scope of the NEPA analysis. Comments resulted in the identification of a number of issues related to the Project and the associated HCP. A total of 14 written or verbal comments were submitted during scoping which identified issues and concerns related to the Proposed Action and the preparation of the EIS. Comments were received via phone, voicemail, electronic mail, and hardcopy mail and are indexed and summarized in Appendix C of the DEIS. These comments were carefully reviewed and categorized and were used in informing the analysis conducted in the FEIS.

During the EIS development, the Service and the Applicant consulted with the Ohio Historic Preservation Office (OHPO) and tribal consultation was initiated in conjunction with obligations required to fulfill requirements under NEPA, Section 106 of the National Historic Preservation Act (NHPA), and the American Indian Religious Freedom Act (see Table 1.7-1for a summary of these statutes and their regulations). All organizations identified as potential consulting parties under these cultural statutes and regulations were contacted by letter, and follow-up phone calls, emails, and personal meetings, as necessary, were completed in order to provide them with information about the proposed Project and to seek additional input regarding the identification and evaluation of archaeological and historic resources. Among the federally designated tribes consulted are the Absentee-Shawnee Tribe of Oklahoma, the Eastern Shawnee Tribe of Oklahoma, the Miami Tribe of Oklahoma, the Ottawa Tribe of Oklahoma, the Shawnee Tribe, the Hannahville Indian Community, the Citizen Potawatomi Nation, the Prairie Band of Potawatomi Nation, and the Forest County Potawatomi Community. These tribes were invited to comment and participate in accordance with Section 101(d)(6)(B) of the NHPA and 36 C.F.R. Part 800.2(c)(2), respectively. The Eastern Shawnee Tribe of Oklahoma indicated an interest in the Project and consultation with this tribe has been completed.

In addition to federal tribal consultation, the state-recognized Piqua Shawnee Tribe submitted a letter in January 2010 to demonstrate interest in this Project and the Service formally acknowledged their interest in the Project via a letter in August 2010. The Applicant met with Tribal representatives in August 2010 to discuss the Project. In an email to the Service dated February 8, 2013, Mr. Gene Parks (Piqua Shawnee Tribe member) indicated that the Tribe has been in contact with the Applicant, has been granted permission to access all the turbine sites, will continue to monitor bird and bat life in the area, and will monitor construction activities that

are near ancient mound sites. Mr. Parks also stated that the email "will conclude our comments on the proposed undertaking."

A total of 103 comment letters were received during the public review and comment period for the DEIS. Four comments letters were submitted by Federal agencies, one comment letter was submitted by a State agency, 11 comment letters were submitted by local agencies, 10 comment letters were submitted by non-governmental organizations, and 77 comment letters were submitted by the general public. NEPA requires that a Federal lead agency consider all comments received during the review and comment period, and provide a response to all comments that are considered substantive. Responses to all substantive comments received during the draft public comment and review period are provided in Appendix K of the FEIS. Comments and the Service response on the FEIS are provided in Appendix A of this ROD.

Service Decision

The Service's decision is to adopt the Applicants FHCP proposed action alternative and issue a Permit to the Applicant pursuant to section 10(a)(1)(B) of the Act for the incidental take of the listed as endangered Indiana bat. The proposed FHCP meets the statutory criteria for issuance of a section 10(a)(1)(B) Permit, meets the Applicant's needs, and the FHCP provides an extensive set of conservation measures that minimizes and mitigates for the incidental take of the Indiana bat to the maximum extent practicable that will be implemented during the 30–year term of the Permit.

We base this decision on the review of: the alternatives and their environmental consequences described in the DEIS and FEIS; the DHCP and FHCP; the IA; and the Service's Biological Opinion and Statement of Findings.

Environmentally Preferred Alternative

NEPA regulations require Federal agencies to specify "the alternative or alternatives which were considered to be environmentally preferable" (40 CFR 1505.2(b)). Based on the description of the alternatives considered in detail in the FEIS and this ROD, we have determined that Alternative A, Maximally Restricted Alternative, would cause the least damage to the biological environment and is therefore the environmentally preferable alternative for this proposed Federal action. Alternative A addresses the primary threat to the Indiana bat through complete shutdown of all turbines during times when the Indiana bat is most at risk. However Alternative A would likely result in the Project not being built, hence none of the environmental benefits associated with the conservation measures and mitigation would occur, as well as foregoing approximately 22.7% of the clean energy that would be generated under the Proposed Action Alternative.

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Signature:

Date: 7/18/13

Deputy Regional Director, Region 3
U.S. Fish and Wildlife Service

Appendix A

Response to Comments:

May 28, 2013

Comment number	Commenter's name	Comment	Response
FWSR3-ES-2012-0036-0102	Gaver, R.	"The Greed of a Select Few will cause the Whole Community to Fall Apart. Stop these Turbine's from ruining Eastern Champaign County."	Thank you for your comment
FWSR3-ES-2012-0036-0103	Doss, D.	"I object to this project because of the negative impact on the wildlife and the environment of Champaign County. It is inconceivable that this issue is still being considered. There is no accurate method to regulate the kill number and therefore, the damage would be undetected until it is too late. These wind projects, if approved, will be a constant reminder of our ignorance and our arrogance as a human race. I support the US Fish and Wildlife Department with my tax dollars and I strongly object. I expect the Department to make a decision based on facts, not rhetoric from the wind companies."	The impact on wildlife and the environment has been fully evaluated in the EIS. The methods for monitoring and regulating take of Indiana bats are described in detail in Section 6.5 of the HCP.

FWS-R3-ES-2012-0036-0104	Stacy, T.	"The process appears to be corrupt and biased in favor of clearing the path for wind electricity regardless of wildlife impacts. However, there is no such thing as wind electricity by itself as a substitute for coal electricity because coal electricity provides required dispatchable capacity during peak demand hours of the year. For wind to be a replacement for the full cost of coal electricity it must be paired in a hybrid with natural gas (or coal) electricity and the maximum ratio of fossil to wind can never exceed 70:30 in Ohio winds. Absent very cheap or free electricity storage (it is absent), wind electricity does not wean us from the consumption of fossil fuels, it locks us into the use of fossil fuels while significantly raising the cost of electricity for everyone. That said, why fudge numbers on initial bat populations using absurdly low sample densities collected by illegal trespassers like Stantech? (Let me know if you need me to substantiate that claim.) Why then put the numbers through silly models full of inaccurate assumptions? Now what makes anyone think that setting aside a forested area somewhere remote from this project will preserve these Indy bats? Can you then send out a memo to the bats telling them where their new habitat is located? It's pretty foolish and smacks of service to dollars, not science. Finally, the way the takings benchmarks are	Section 1.3.1 of the HCP describes that wind energy has the potential to displace energy generated at fossil-fueled plants, but does not claim to substitute or replace all coal energy. Initial bat population numbers were generated using the results of standard pre-construction survey protocols for Indiana bats, approved by the Service and ODNR (Service 2007, ODNR DOW 2009). See HCP Sections 4.2.4 and 5.1.2.6.1. Population estimates for maternity colonies generated from these surveys (70 females per colony) were comparable to population estimates in the published literature (50-80 females per colony, Whitacre and Brack 2002). The intent of the mitigation proposal is to provide a benefit to the species as a whole, by protecting areas where large numbers of Indiana bats congregate. This is addressed in Section 6.3 of the HCP. While it is true that the models used require assumptions to be made about starting population size to model the impacts of the taking, each assumption is clearly stated along with the rationale for why these assumptions are reasonable and based on the best scientific information available.

		constructed, if the (speculated) initial Indy Bat population is actually lower than expected, the permit allows a shorter path to extinction than if the starting Indy bat population were higher, as a higher percentage of the total bat population could be killed the first year, reducing subsequent offspring the next, and so on. I just don't think this work has been done scientifically at all. Methodology, accuracy, bias all point to a foregone conclusion before the study was even constructed. If you are proper scientists, you would admit it's time to start over on this one. Thank you."	
FWS-R3-ES-2012-0036-0105	Hyman, J.	See Attachment 1, "Conservation Law Center_FINAL_Buckeye Comments FEIS-FHCP_FWS-R3-ES-2012-0036_5.17.13" but in summary: "1. THE AGENCY'S "COMMENSURATE" APPROACH DOES NOT LEAD TO MINIMIZING THE IMPACT OF TAKE TO THE MAXIMUM EXTENT PRACTICABLE, AND THE APPROACH CONFLICTS WITH *GERBER V. NORTON*; 2. THE AGENCY'S "COMMENSURATE" APPROACH TO	The crux of most of the comments provided in this document is that the Service utilizes a "commensurate" approach to minimizing the impact of take to the maximum extent practicable, that the commenter defines as 1) the reduction in take predicted for the proposed measures is "commensurate" with (i.e., proportional to) the "level of impact" and the "risk" of take, and (2) the proposed measures significantly reduce predicted

		MINIMIZATION HAS LED THE FWS TO IGNORE REASONABLE ALTERNATIVES IN THE FEIS, THUS VIOLATING NEPA; and 3. THE AGENCY CANNOT BALANCE TAKE OF INDIANA BATS WITH FUTURE CARBON EMMISION BENEFITS OF WIND POWER TO SATISFY §1539(a)(2)(B)(ii)."	turbine-related mortality relative to predicted mortality with no operational measures applied..." The Service disagrees with the "commensurate" approach described and we have not taken this approach when evaluating the HCP. The determination of whether or not a project has minimized the impacts of the taking to the maximum extent practicable is a biological standard that considers how the species is impacted by the taking and mitigation, and not just the quantity of take. If the Applicant provides biologically based minimization measures and mitigation measures that are fully commensurate with the level of impacts and implements mitigation that offsets the impacts of the take, they have minimized and mitigated to the maximum extent practicable. However, in a situation where the applicant is unable to fully compensate for the impacts of the take, factors such as economics may be considered by the agency in making its determination of whether the maximum extent practicable standard has been met. The issuance criterion is "the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking" [16 USC Section 10(a)(2)(B)(ii))]. The impact of the taking is not dictated by the starting cut-in speed, but rather is dictated by the quantity of take and how

			it is distributed over time and population segments (see Section 5.1.2.5 of the HCP [Biological Significance of Incidental Take (Collision Mortality)]), how the populations to which the taken individuals belong respond to the loss of individuals, and how each subpopulation contributes to the population as a whole. That is to say, the "impact of the taking" is different than the quantity of taken individuals. When evaluating the HCP, the Service first considered, does the HCP utilize biologically based minimization measures that will reduce the impact of take on the species? The science used to formulate the minimization plan was informed by leading Indiana bat experts within the USFWS, the ODNR and from independent consultants and by relevant research conducted at wind projects throughout North America. The cut-in speeds selected are within the range of those cut-in speeds tested in the published literature, are applied throughout the period of risk to the Indiana bat, and implementation of the feathering and cut-in speed regime is anticipated to reduce potential Indiana bat take by approximately 68.3% (see discussion in Section 6.2.2 of the HCP [Minimization Measures]). Therefore the Service believes that the Applicant has minimized the quantity of take.

			Next, the Service evaluated how the quantity of take will impact the populations to which the taken individuals belong. The impact associated with the taking has been assessed at multiple levels in the HCP, EIS, and BO: maternity colonies affected, hibernacula affected, Midwest Recovery Unit, and listed entity (species rangewide). These analyses indicate that incidental take of individual bats associated with operation of the project is likely to have insignificant impacts on the subpopulations to which the taken individuals belong, compared to the population's baseline condition. Thus, the Service finds that the Applicant has minimized the impact of the taking to the maximum extent practicable—to the extent that the impacts are insignificant. Further, the Service analyzed whether the Applicant mitigated the impacts of the taking, using biologically based mitigation measures that will contribute toward recovery of the species. The mitigation measures are supported by the Service's Indiana bat Recovery Plan, will benefit the affected population at the Midwest RU level, and will fully offset the impacts of the taking. Therefore the Service believes that the Applicant has mitigated the impact of the taking to the maximum extent practicable.

			The HCP Handbook describes two factors that are taken into account when determining if an application for an ITP minimizes take to the maximum extent practicable: adequacy of the minimization and mitigation program and whether it is the maximum that can be practically implemented by the Applicant. The HCP Handbook states that "to the extent maximum that the minimization and mitigation program can be demonstrated to provide substantial benefits, less emphasis can be placed on the second factor." Thus, an assessment of economic feasibility can be considered in part of the assessment of the "maximum that can be practically implemented by the Applicant," particularly if the mitigation does not fully offset the impact of the taking. In this instance the minimization and mitigation measures were adequate to ensure that there was not a significant impact on the populations to which the taken individuals belong. Therefore because the minimization and mitigation fully offset the impact of the taking, it is not necessary to determine if the plan is the "maximum that can be practically implemented by the Applicant." The commenter argues that the Service should have considered an alternative with a cut-in speed of 6.5 m/s because, "if the science reasonably indicates that there may be a significantly more

			effective alternative for reducing impact or risk that also may be practicable to achieve, then the agency must consider and analyze that alternative as a candidate for the minimizing strategy." While the Service does not disagree that higher cut-in speeds may result in less bat mortality, there are infinite combinations of cut-in speeds higher than the proposed action, or even higher than 6.5 m/s, that could be applied to reduce bat mortality more. The Service's EIS evaluates an alternative with complete curtailment at night that would eliminate bat mortality entirely. Because the impact on Indiana bats from the proposed alternative and mitigation is not significant, then an alternative with a cut-in speed that would further reduce the already insignificant impact is not necessary. The HCP does not propose to use adaptive management to delay the minimization strategy, nor to use it "if the proposed take limit is exceeded." Rather, the proposed cut-in speeds have been demonstrated to be effective and the proposed take limit has been analyzed and shown to have insignificant impacts on the Indiana bat population at multiple levels, based on the best scientific information available. The adaptive management plan is designed to maintain take at these levels and not allow the take limit to be exceeded. It is described fully in Section 5.6.5.3 of

			the HCP. The commenter's suggested alternative of a 6.5 m/s cut-in speed during all seasons was not evaluated in the EIS because the Service analyzed a different suite of operational regimes, including those that would be more and less restrictive that that proposed in the HCP. While the Service does not disagree that higher cut-in speeds may result in less bat mortality, there are infinite combinations of cut-in speeds higher than the proposed action, or even higher than 6.5 m/s that could be applied to reduce bat mortality more. Instead the Service's EIS evaluates an alternative with complete curtailment at night that would eliminate bat mortality entirely. The Service believes this is a reasonable alternative to consider in lieu of an alternative with a cut-in speed of 6.5 m/s. The biological Goals and Objectives included in the HCP are the Applicant's goals and objectives that they intend the HCP to achieve. They are not the Service's goals and objectives, nor do they influence the Service's analysis of the impact of the taking, the minimization, or the mitigation measures. The Service does not claim in the EIS or Biological Opinion that there is a causal connection between greenhouse gas emissions or reductions for the Buckeye Wind Project and effects on the

			Indiana bat. The Service has not justified "allowing increased take of Indiana bats from a specific facility simply because that facility is consistent with that [renewable energy] policy." In contrast, the Service has evaluated the HCP relative to the application requirements and issuance criteria laid out in 50 CFR 17.22(b)(1) and (2) to determine if an ITP can be issued for the application submitted.
FWS-R3-ES-2012-0036-0106	Pullins, M.	"To whom it may concern, I have reviewed and support the Final Environmental Impact Statement (EIS), Final Habitat Conservation Plan (HCP), Final Implementing Agreement (IA), and Draft Programmatic Agreement (PA) for an Incidental Take Permit for the Buckeye Wind Power Project. As a farmer and avid hunter I am keenly interested in wildlife conservation, particularly in my native community of Champaign County, OH. My conservation support is evident in numerous conservation activities undertaken on my farms. The programs and permits you propose for the Buckeye Wind Power Project align with my conservation interests. I urge you to approve the final plan as currently structured. Sincerely, Matthew M Pullins"	Thank you for your comment
FWS-R3-ES-2012-0036-0107	McConnell, R.	See attachment 2, "20130520 UNU comments on Final EIS" but in summary: "1) Issuance of a thirty-year ITP will violate the ESA; 2) The Service has refused to consider alternatives	Section 2.3.1 of the EIS describes why a shorter permit term is not appropriate. It is appropriate to include construction and decommissioning within the permit term because they are part of the planned activities

		that it deemed reasonable in the context of a proposed wind energy project ten miles distant from the Buckeye Wind project; and 3) Consideration of the Buckeye Wind HCP must be coordinated with the Midwest Wind Multi-Species HCP. "	and adverse effects may occur during these activities. These effects are described in Section 5.0 of the HCP, 5.5.2 of the EIS, and in the Service's Biological Opinion. Adverse effects may result during construction and decommissioning, but based on specific avoidance and minimizations measures incorporated into the HCP (see HCP Sections 6.1.1, 6.1.2, 6.2.1 and 6.2.4), are not expected to rise to the level of take, therefore take is not allocated to these activities. Lethal take during operations that was estimated using modeling is only applied to the 25 years when the project would be operating and is not applied during the 5 years of construction/decommissioning, therefore the Service disagrees that "the modeling...grossly overstate the risk of take during the five-year period that such activities will occur." The reference to the Service's 09/28/2008 letter regarding Babcock and Brown's proposed wind energy project in Logan County is taken out of context in comparison to the Buckeye Wind HCP. The Service's 09/28/2008 letter was in reference to a proposed wind project in the early stages of development, in a different Action Area, that may have had different effects on the Indiana bat in comparison to the Buckeye Wind project. This letter transmitted our initial approach to that specific project. In contrast, the Service has been coordinating with Buckeye Wind on the HCP for multiple years and has worked extensively to prepare the EIS. The EIS fully evaluates the impacts of the project, as proposed, as well as several other reasonable alternatives, as required under NEPA. The Commenter specifically references "minimization

			alternatives" including avoiding all forest clearing and use of a phased-in approach. Buckeye Wind has indicated that avoiding all clearing is not possible, however they have limited forest clearing to 16.8 acres, and the impact of this forest loss on the Indiana bat is analyzed in Section 5.5.2 of the EIS, 5.2.1.1 of the HCP, and in the BO, as required under 50 CFR 17.22(b)(1)(iii)(A). The Service did not analyze an alternative for phased construction because that is not how the proposed project is defined. Other wind projects (e.g., Beech Ridge HCP, West Virginia) may include an alternative with several phases of development because their project has already constructed the first phase, and the second phase may or may not be developed ultimately. Section 1.5.1 of the EIS describes the purpose of the action, which is among others, to respond to Buckeye Wind's application for an ITP. Section 2.3.1 of the HCP indicates that the project may or may not be built in phases, this is dependent on a number of factors. It is not clear to the Service that a phased approach would have significantly different effects on the Indiana bat or the human environment in the case of the Buckeye Wind HCP. Overall the Service does not believe that analysis of a phased approach as an alternative under NEPA is either necessary or appropriate in this instance. The Service reiterates that we do not believe that consideration of the Buckeye Wind HCP must be coordinated with the Midwest Wind Multi-species HCP. The USFWS has received an application for an Endangered Species Act Section 10(a)(1)(B) permit and

			is evaluating it as required under 50 CFR §17.22(b)(2) and §13.21. While the Midwest Wind Energy Multi-species HCP process is underway, it is in the early stages of development. The Draft HCP is in a very early stage, and a Draft EIS has not yet been started. Additionally, the Midwest Wind Energy Multi-species HCP and EIS will have to address all existing wind projects, including the Buckeye Wind Project if it is built and operating at the time of analysis, as part of the baseline conditions. The Buckeye Wind HCP is for a single project in a specific location, it is not a regional proposal and it is not proposed for the same geographic area as the Midwest Wind Energy Multi-species HCP. Further, the timing of the two initiatives is distinct. Therefore it is not appropriate to mandate that the Buckeye Wind project be considered under the Midwest Wind Energy Multi-species HCP initiative. Furthermore, any ITP issued by the Service (for wind power or otherwise) is held to the same standards, which are the issuance criteria at 50 CFR 17.22(b)(2).
FWS-R3-ES-2012-0036-0108	McConnell, D.	see Attachment 2, "20130520 UNU comments on Final EIS"	See responses to FWS-R3-ES-2012-0036-0107
FWS-R3-ES-2012-0036-0109	Johnson, J.	See Attachment 2, "20130520 UNU comments on Final EIS"	See responses to FWS-R3-ES-2012-0036-0107
FWS-R3-ES-2012-0036-0110	Culp, L.	"Wind developers continue to get a "pass" for killing bats, eagles, hawks because they wrap themselves in a faux green cloak. Public perception is this agency protects threatened/endangered species. Granting permits for legally taking threatened/endangered species is contradictory to your purpose."	Sections 1.1 and 1.6.1.1 of the EIS describe the Service's authority under Section 10(a)(1)(B) of the Endangered Species Act to issue permits for incidental take, and the requirements for issuing such permits.

FWS-R3-ES-2012-0036-0111	Westlake, K. for NEPA/EPA, Chicago, IL	"The U.S. Environmental Protection Agency Reviewed the U.S. Fish and Wildlife Service's (USFWS) Final EIS and Habitat Conservation Plan (HCP) for the above-mentioned project in accordance with our responsibilities under the National Environmental Policy Act, the Council on Environmental Quality regulations for implementing NEPA, and Section 309 of the Clean Air Act. In our September 24, 2012 comment letter, EPA rated the Draft EIS and HCP as *Lack of Objections*. EPA has no objection to the Proposed Action selected by USFWS, and we maintain our lack of objections. Mitigation for the potential impact of the authorized take will be provided by the conservation program described in the HCP. Although we have no objection to the Proposed Action and HCP, we recommended in our Draft EIS comment letter that several issues be clarified in the Final EIS. Our comment letter requested information pertaining to streams, floodplains, intermittent or ephemeral streams and the eastern massasauga rattlesnake. After reviewing the Final EIS, HCP and responses to comments, we believe our concerns regarding these issues were adequately addressed.	Thank you for your comment.

Attachment 1. Conservation Law Center_FINAL_Buckeye Comments FEIS-FHCP_FWS-R3-ES-2012-0036_5.17.13

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Public Comments Processing
Attn: FWS-R3-ES-2012-0036
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, MS 2042-PDM
Arlington, VA 22203

Electronic Portal submission: receipt verification requested

Re: Comments on Final EIS and Final HCP for Buckeye wind power project, Champaign County, Ohio. FWS-R3-ES-2012-0036.

Dear Ms. Seymour:

We offer these comments on the Final National Environmental Policy Act Environmental Impact Statement ("FEIS") and the Final Habitat Conservation Plan ("FHCP"), for the Buckeye wind power project ("Buckeye" or "Project") in Champaign County, Ohio. The Conservation Law Center is a nonprofit public interest law firm located in Bloomington, Indiana. Our mission is to help clients solve natural resources conservation problems, to work to improve the body of conservation law and policy, and to educate law students in our clinical program operated in agreement with Indiana University Maurer School of Law.

Thank you for your responses to our comments on the draft EIS and draft HCP. Your responses have usefully crystalized our points of difference with the agency with regard to the interpretation of the ITP/ approval criterion at 16 U.S.C. § 1539(a)(2)(B)(ii).

To issue an ITP, the FWS must find, among other things, that the Project's applicant "will, to the maximum extent practicable, minimize and mitigate the impacts of such taking" of listed species. 16 U.S.C. § 1539(a)(2)(B)(ii).[1] This criterion contains both a minimization requirement and a mitigation requirement. We respectfully disagree with the agency's approach

[1] See also 50 C.F.R. § 17.22(b)(2)(i)(B) (essentially repeating the statutory language: "The Director . . . shall issue the permit if he or she finds that: . . . (B) The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such takings"); FWS, *Habitat Conservation Planning and Incidental Take Permit Processing Handbook* (Nov. 4, 1996), pp. 7-3 to 7-4 ("*HCP/ITP Handbook*"); FWS, *Indiana Bat Section 7 and Section 10 Guidance for Wind Energy Projects, Revised* (Oct. 26, 2011) ("*Wind Energy Project Guidance*"), p. 47.

to the minimization requirement under § 1539(a)(2)(B)(ii). We now outline our disagreement with the agency in three separate comments for the administrative record.[2]

COMMENT 1. THE AGENCY'S "COMMENSURATE" APPROACH DOES NOT LEAD TO MINIMIZING THE IMPACT OF TAKE TO THE MAXIMUM EXTENT PRACTICABLE, AND THE APPROACH CONFLICTS WITH *GERBER V. NORTON*.

In our prior comments on the draft versions of the EIS and HCP, we asked the agency to consider and analyze an alternative to the proposed operational strategy to protect endangered Indiana bats. Our requested alternative would use higher cut-in speeds for turbines than the Applicant has proposed (and which the agency is poised to approve).[3] The FHCP's proposed strategy applies different turbine cut-in speeds to each of four habitat categories and three seasonal categories, with the proposed cut-in speeds ranging between 5.0 m/s and 6.0 m/s. The best available science shows that a cut-in speed of at least 6.5 m/s is likely the most effective cut-in speed for reducing take of bats, that a 6.5 m/s cut-in speed is (statistically) significantly[4] more effective at reducing bat fatalities than is a 5.0 m/s cut-in speed, and that using a 6.5 m/s cut-in speed for all turbines may reduce the risk of Indiana bat fatalities significantly more than the proposed strategy.[5] The agency does not deny these conclusions. The best available science thus supports and compels serious consideration of an alternative with uniformly higher cut-in speeds. We therefore asked the agency to consider and analyze an alternative that begins with using 6.5 m/s cut-in speed for all turbines in all seasons for which the risk of take of Indiana bats is not zero.[6]

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[2] We do not specifically comment on the way that the agency interprets and handles mitigation in the FEIS and FHCP, except to highlight the distinction between "minimization" and "mitigation."

[3] Studies have shown that turbine-related fatalities of bats can be reduced if cut-in speeds of turbines are increased above 3.5 m/s and the turbine blades are feathered below the cut-in speed. Studies to date have looked at the reduction in turbine-related bat fatalities as cut-in speeds are increased, up to 6.5 m/s. Although different studies have examined different sets of cut-in speeds, so that comparisons across studies are difficult, the studies to date strongly indicate that 6.5 m/s is significantly more effective at reducing risk than other cut-in speeds examined.

[4] Our use of the term "significant" throughout these comments refers to statistical significance.

[5] We also commented that varying cut-in speed by the amount of forested habitat may not be an effective strategy, since Indiana bats are at risk of turbine-related fatality while migrating across non-forested habitat as has been shown by the recorded Indiana bat fatalities at the Fowler Ridge Wind Farm in Benton County, Indiana, which is built on agricultural land.

[6] Although autumn may be the season in which most Indiana bat fatalities are expected, the risks of Indiana bat fatalities in spring and summer are not zero. Neither the FEIS nor the FHCP indicates that Indiana bat fatalities in spring and summer are likely to be nonexistent.

In the FWS's responses to our prior comments, the agency rejected our request that it consider and analyze our "all-turbines 6.5 m/s cut-in speed" alternative. The immediate harm in the FWS's refusal to consider our requested alternative in the EIS is that if the alternative is not considered in the EIS it will not show up in the HCP or ITP. That statement is borne out by the FEIS and FHCP. Thus, FWS's refusal to consider our requested alternative guarantees that it will not be an available option when the ITP/HCP application is considered for approval.

In rejecting our request, the agency's responses have, however, clarified the FWS's approach toward applying the minimization requirement under 16 U.S.C. § 1539(a)(2)(B)(ii) to the Buckeye ITP/HCP application. We contend that the "commensurate" approach set forth in the agency's responses, and in particular the agency's application of this approach to the Buckeye Project, does not reflect a reasonable interpretation of the minimization requirement under § 1539(a)(2)(B)(ii) and thus contravenes the plain meaning of the ESA. Our differences with the agency appear to stem from a dispute over statutory interpretation rather than from a dispute over science. Judicial deference to the FWS's approach is limited because that approach is not codified in ESA regulations.

The following subsections outline the details of our contention that the FWS's "commensurate" approach and the agency's application of this approach to the Buckeye Project violate the ESA.

A. FWS's Responses to Our Prior Comments Verifies the Agency's "Commensurate" Approach to Minimization Under 16 U.S.C. § 1539(a)(2)(B)(ii).

The specific FWS responses quoted below illustrate that the agency is poised to approve proposed operational measures to protect bats so long as (1) the reduction in take predicted for the proposed measures is "commensurate" with (i.e., proportional to) the "level of impact" and the "risk" of take, and (2) the proposed measures significantly reduce predicted turbine-related mortality relative to predicted mortality with no operational measures applied (rather than comparing them to predicted mortality with potentially more effective practicable measures).

Itemized Comment Number 0030-15

> The EIS evaluates a sufficient range of alternatives including the use of several feathering and cut-in speed regimes and full curtailment at night, measures which have been proven to reduce bat fatalities at wind power facilities. Multiple studies have tested a range of cut-in speeds between 3.5 m/s and 6.5 m/s (Good et al. 2012, Good et al. 2011, Arnett et al. 2011, Baerwald et al. 2008). *All of these studies have documented a significant difference in the level of bat mortality between turbines that are operating per the manufacturer programmed settings, and those that are operating with feathering and use of a cut-in speed.* The selection of cut-in speeds analyzed in the EIS considers a range of cut-in speeds between the range that has been tested, as well as full curtailment at night. *All of these alternatives will result in reduction in bat mortalities compared to turbines operating per the manufacturer programmed settings.* There is an infinite variety of combinations of cut-in speeds and habitat categories that could be combined to develop many different possible alternatives. The alternatives selected for analysis in the EIS present a reasonable range of possible alternatives.

Emphasis added.

Itemized Comment Number 0030-16

> The determination of whether or not a project has minimized the impacts of the taking to the maximum extent practicable is not strictly a determination of commercial viability or economic feasibility. Instead it is a biological standard that considers how the species is impacted by the taking and mitigation. *If the Applicant provides biologically based minimization measures and mitigation measures that are fully commensurate with the level of impacts and implements mitigation that offsets the impacts of the take, they have minimized and mitigated to the maximum extent practicable.*

Emphasis added.

Itemized Comment Number 0030-20

> [A]s the commenter notes in its summary of the curtailment studies that the Project in Casselman, PA and Fowler Ridge, IN, both found significant reductions in mortality at both 5.0 m/s and 6.5 m/s. *The HCP makes the reasoned and non-arbitrary argument that, if both 5.0 m/s and 6.5 m/s result in significant reduction in mortality, then cut-in speeds between 5.0 m/s and 6.5 m/s can be expected to result in similar reduction in mortality.*

Emphasis added.

Itemized Comment Number 0030-21

> Multiple studies have considered different cut-in speeds to date, and evidence demonstrates that use of feathering and a variety of different cut-in speeds *can significantly reduce all bat mortality compared to wind turbines that are not operating with feathering and cut-in speeds.* Section 4.5.5 of the HCP (Collision Mortality at Wind Facilities) presents these cut-in speed studies and results. Buckeye Wind has proposed a feathering and cut-in speed regime that varies based on the biology of the Indiana bat (by season of risk, habitat quality, and temperature). The cut-in speeds selected are within the range of those cut-in speeds tested in the published literature, and implementation of the feathering and cut-in speed regime is anticipated to reduce potential Indiana bat take by approximately 68.3% (see discussion in Section 6.2.2 of the HCP [Minimization Measures]). Buckeye Wind is not required to demonstrate that implementation of a higher cut-in speed is "impracticable," rather under 50 CFR § 17.22(b)(2) they are required to document that they have, to the maximum extent practicable, minimized and mitigated the impacts of the taking, and that the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild. . . . *If the Applicant provides biologically based minimization measures and mitigation measures that are fully commensurate with the level of impacts and implements mitigation that offsets the impacts of the take, they have minimized and mitigated to the maximum extent practicable.*

Emphasis added.

B. FWS's "Commensurate" Approach to Minimization Under 16 U.S.C. § 1539(a)(2)(B)(ii) Contravenes the Plain Meaning of the ESA and Is Invalid.

The FWS's responses to our prior comments indicate the agency has refused to analyze our requested alternative – *i.e.*, cut-in speed of 6.5 m/s for all turbines – which the best available science indicates may be significantly more effective at reducing take of Indiana bats than the proposed strategy. The agency and Applicant have instead selected cut-in speeds with known lower effectiveness in an attempt to match effectiveness with what the agency perceives as varying risk over time and space. The FWS also takes the position that a feathering plus cut-in speed strategy that "can significantly reduce all bat mortality compared to wind turbines that are not operating with feathering and cut-in speeds" (Response to Itemized Comment 0030-21) is the strategy that minimizes take to the maximum extent practicable. Such an approach to the minimization requirement in § 1539(a)(2)(B)(ii) violates the ESA.

We respectfully disagree with the FWS's position that the minimization of take need only be "commensurate" with the predicted level of impacts or the predicted risk.[7] The dictionary meaning of "commensurate" is "corresponding in size or degree" or "in proportion."[8] The "commensurate" approach is essentially a "good enough" approach in which the agency deems that a set of measures "minimizes" the impact of take if the reduction in take produced by the measures, relative to a baseline impact in the absence of the measures, is good enough given the amount of take predicted. Our position, in contrast, is that the level of impacts and risk are to be minimized "to the maximum extent practicable," which requires that an alternative that is reasonably expected to reduce take significantly more than the next-best strategy and that can be practicably achieved is the minimizing alternative. Moreover, because the FWS has relied on its view that the chosen curtailment strategy need only be "commensurate" with the predicted level of take and need only reduce take significantly more than would the manufacturer's programmed cut-in speed (*e.g.*, 3.5 m/s), the agency has refused to consider whether an alternative with 6.5 m/s cut-in speed across all turbines would reduce take significantly more than the proposed strategy and still be practicable for the Applicant to implement. If the science reasonably indicates that there may be a significantly more effective alternative for reducing impact or risk that also may be practicable to achieve, then the agency must consider and analyze that alternative as a candidate for the minimizing strategy.

The illegality of the agency's and Applicant's "commensurate" approach to choosing a minimization strategy and meeting the minimization requirement in § 1539(a)(2)(B)(ii) is supported by three considerations.

First, the "commensurate" approach to choosing a minimization strategy conflicts with the ruling in *Gerber v. Norton*, 294 F.3d 173 (D.C. Cir. 2002). In *Gerber v. Norton*, the FWS issued an ITP to a residential developer to take an endangered fox squirrel. The Environmental Assessment had presented a "Reduced Impact Alternative" to the applicant's proposed plan that "would reduce the likelihood of take" of fox squirrels by relocating the development's access road "away from the [squirrels'] forested edge habitat," but the applicant rejected the more effective alternative. *Id.* at 177–78. The *Gerber* Court found that the agency's permit issuance

[7] Below, we explain that mitigation and minimization are treated differently by courts.
[8] www.oxforddictionary.com.

violated the ESA. The Court stated that "before issuing the permit, the Service was obliged to find independently that no practicable alternative to [the applicant's] development plan would minimize the taking of fox squirrels." The Court then concluded, "Given the Service's finding that moving the road would reduce the taking of squirrels, the agency could not have issued the permit consistent with [the ESA] without making a finding that the Reduced Impact Alternative was impracticable." *Id.* at 185.

The FWS is poised to commit the same error considered in *Gerber v. Norton* by refusing to consider our requested "all-turbines 6.5 m/s cut-in speed" alternative. Although here, unlike in *Gerber*, the FWS has not analyzed and found a more effective alternative, the agency cannot rest on that distinction. The agency has not analyzed and found a more effective and practicable alternative to the proposed mixed cut-in speed strategy simply because the agency has not tried to do so, being satisfied that its "commensurate" approach produces a sufficient result. This issue is discussed in more detail in subsection C below.

Second, mitigation – not minimization – is the context in which the agency's "commensurate" standard makes sense and is supported by caselaw. In contrast, *no* judicial decision of which we are aware applies a "rationally related" or "commensurate" standard to *minimization* efforts. This point is discussed in more detail in subsection D below.

Third, the agency and Applicant cannot rely on adaptive management to satisfy the minimization requirement with a wait-and-see approach after implementing a second-best strategy, especially where measures reasonably expected to significantly further reduce take are immediately available. This point is discussed further in subsection E below.

C. Minimization and Practicability Are Determined First According to the Lessons in *Gerber v. Norton*.

Gerber v. Norton teaches that (1) the agency cannot ignore an alternative that may significantly reduce take further than the next-best strategy and that may be practicably achieved, and (2) the agency cannot approve an ITP/HCP for a purported minimization strategy that is thought (according to the best available science) to be significantly less effective at reducing take than an alternative strategy, *unless* the more-effective alternative is found to be impracticable to achieve. Moreover, the proper comparison for the proposed operational strategy is *not* with the

manufacturer set cut-in speed without feathering. Granted, the FHCP's proposed operational strategy is significantly more effective at reducing take than the "manufacturer programmed settings."[9] Instead, the proper comparison is with our requested alternative, which is reasonably expected to reduce take significantly more than the proposed strategy and which may be practicably achieved.

FWS does not dispute that our requested "all turbines 6.5 m/s cut-in speed" alternative could reduce take significantly more than the Applicant's proposed strategy. That is, the agency does not claim that the effectiveness of the proposed strategy for reducing take is statistically equivalent to our requested alternative. In fact, the FHCP's adaptive management plan to increase cut-in speed to 7.0 m/s (*see* FHCP, p. 216) if the proposed take is exceeded is evidence that the agency and Applicant recognize that higher cut-in speeds than those proposed are significantly more effective at reducing turbine-related bat mortality.[10] If higher cut-in speeds were not more effective than the proposed cut-in speeds, there would be no use in adding them to the adaptive management plan. Another example of the potential for our 6.5 m/s cut-in speed alternative to reduce bat take significantly more than the proposed strategy comes from the draft EIS for the Fowler Ridge Wind Farm ITP/HCP application.[11] The Fowler Ridge DEIS recognizes that a 6.5 m/s cut-in speed is significantly, in a statistical sense, more effective than a 5.0 m/s cut-in speed, as shown in Table 1 below.

Furthermore, neither FWS nor the Applicant claims that our requested alternative would be clearly "impracticable" – that is, the significantly more effective alternative would not be supported by the existing technology or the costs of the alternative are prohibitory in relation to the resources and financial ability of the applicant.[12]

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[9] The agency response to Itemized Comment Number 0030-15 states, "All these [proposed] alternatives will result in reduction in bat mortalities compared to turbines operating per the manufacturer programmed settings."

[10] The agency's response to Itemized Comment Number 0030-33 sets forth its plan to increase cut-in speeds as an adaptive management measure imposed if allowable take is exceeded: "Increasing the cut-in speeds by 1 m/s is expected to reduce take of all bats to very low levels. Further documentation of Indiana bat mortality would increase the cut-in speeds to 7.0 m/s in all Categories."

[11] Fowler Ridge Draft EIS (March 2013), FWS-R3-ES-2013-0032.

[12] The "commensurate" approach is unreasonable regardless of which statutory term or phrase it is associated with. The ESA uses the terms and phrases "minimize," "to the maximum extent," and "practicable" in § 1539(a)(2)(B)(ii). The ESA also uses one or more of these terms and phrases repeatedly across different ESA sections and amendment years. The term "minimize" means to "reduce to the smallest possible amount or degree."[12] Lest there be ambiguity regarding the meaning of "minimize," Congress modified the term "minimize" in § 1539(a)(2)(B)(ii) with the phrase

Table 1. Comparison of Reduction in Take Predicted for Different Cut-In Speed Alternatives, Presented in Tables 5.4 and 5.5, pp. 127–28 of Draft EIS for Fowler Ridge ITP/HCP.[13]

Table 5.4 Predicted Indiana Bat Fatalities per Year by EIS Alternative

Alternative	Indiana Bat Take			
	Bats/Turbine/Year (fall only)	355 Turbines[3] (bats/yr) (90% CI)	449 Turbines[4] (bats/yr) (90% CI)	94 Turbines[5] (bats/yr) (90% CI)
No Operational Adjustment Scenario[1]	0.048[56]	17.0 (14.0-21.1)	21.6 (18.0-26.9)	4.5 (3.8-5.6)
No Action Alternative[2]	0	0	0	0
3.5m/s Cut-In Speed (Feathered) Alternative	0.031	10.9 (9.0-13.5)	13.9 (11.5-17.2)	2.9 (2.4-3.6)
5.0m/s Cut-In Speed Alternative (Applicant Proposed Action)	0.024	8.6 (7.0-10.6)	10.9 (8.8-13.4)	2.3 (1.9-2.8)
6.5m/s Cut-In Speed Alternative	0.011	3.9 (3.1-4.6)	4.9 (4.0-5.9)	1.0 (0.8-1.2)

[1]No curtailment, no feathering below 3.5 m/s wind speed. Not an alternative under consideration. Included only for comparison purposes.
[2]No nightly operation during the fall migration period (August 1-October 15).
[3]Phases I - III in operation; 2 year of the 22-year life of the Project
[4]Phases I - IV in operation; 15 years of the 22-year life of the Project
[5]Phase IV only in operation; 5 years of the 22-year life of the Project

Table 5.5 Predicted Indiana Bat Fatalities over the 22-Year Life of Fowler Ridge Wind Farm by EIS Alternative

Alternative	Indiana Bat Take [3]
No Operational Adjustment Scenario[1]	381
No Action Alternative[2]	0
3.5m/s Cut-In Speed (Feathered) Alternative	245
5.0m/s Cut-In Speed Alternative (Applicant Proposed Action)	193
6.5m/s Cut-In Speed Alternative	86

[1]No curtailment, no feathering below 3.5 m/s wind speed. Not an alternative under consideration. Included only for comparison purposes.
[2]No nightly operation during the fall migration period (August 1-October 15).
[3]Take = (total bats killed per year Phases I - III (355 turbines) x 2 years) + (total bats killed per year Phases I - IV (449 turbines) x 15 years) + (total bats killed per year Phase IV x 5 years)

"to the maximum extent practicable." This phrase "imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible." *Defenders of Wildlife v. Babbitt*, 130 F.Supp.2d 121, 131 (D.D.C. 2001) (interpreting phrase in context of 16 U.S.C. § 1533(f)(1)(B)).

[13] The Fowler Ridge DEIS, which presumably reflects the best available science, predicts that a cut-in speed of 6.5 m/s (Alternative 3) will reduce Indiana bat mortality to less than half of the mortality associated with a cut-in speed of 5.0 m/s (Alternative 2, Applicant's preferred alternative). This reduction is highly statistically significant.

D. Mitigation Addresses the Unavoidable Take Remaining *After* Minimization.

FWS's responses to our prior comments also appear to suggest that selecting a "commensurate" alternative is good enough because in any event the take of Indiana bats will be mitigated. Mitigation, however, is selected only *after* the impact of take is minimized to the maximum extent practicable. FWS guidance states in relevant part:[14]

> 68. Is it allowable for an applicant to mitigate in lieu of minimization measures, or must the applicant first minimize if possible?
>
> Response: An applicant must first minimize to the maximum extent practicable.
>
> 69. How do developers demonstrate "to the maximum extent practicable" when it comes to siting wind projects? How do we evaluate whether their "demonstration" is sufficient?
>
> Response: In reviewing an applicant's HCP, the Service must analyze the biological impacts of the project on the covered species. If the proposed siting of some or all of the turbines will cause impacts to the species the applicant should minimize those impacts by moving the turbines to more suitable locations. If an applicant is unwilling to move the turbines to further minimize the impacts due to economic reasons, the Service should require them to provide justification why they are unable to do so. An independent analysis or third party should review the information provided by the applicant to verify they have sited the turbines to the maximum extent practicable.

In various contexts the agency has repeatedly recognized that the applicant for an ITP/HCP is required to mitigate the level of take that is "unavoidable" after (*i.e.*, in spite of) minimization efforts. Take is "unavoidable" only if take that can practicably be avoided is in fact avoided. That happens only if take is minimized to the maximum degree practicable before the necessary mitigation is determined.

Mitigation – not minimization – is where a "commensurate" standard makes sense and is supported by caselaw. Courts have decided that *mitigation* efforts need only be "rationally related to" the level of take remaining after minimization. In contrast, *no* judicial decision of

[14] FWS, *Indiana Bat Section 7 and Section 10 Guidance for Wind Energy Projects, Revised* (Oct. 26, 2011) ("*Wind Energy Project Guidance*"), pp. 47–48.

which we are aware applies this "rationally related" or "commensurate" approach to *minimization* efforts.

A source of the "rationally related to the level of take" approach is *National Wildlife Federation v. Norton*, 306 F.Supp.2d 920 (E.D. Cal. 2004) ("*NWF*"). In *NWF*, the plaintiffs challenged the issuance of an ITP for the proposed Metro Air Park development based in part on the contention that the required *mitigation* was not the maximum practicable.[15] The plan had provided for habitat acquisition to mitigate habitat lost to development – for every acre of land developed, half an acre of habitat would be permanently protected off-site.[16] According to the court, the plaintiffs had argued incorrectly that where the development of land on-site is mitigated through the purchase and set-aside of land off-site, the "mitigate to the maximum extent practicable" requirement means that the plan must require the purchase of as much mitigation land as the particular developer possibly could afford while still going forward with the development. The court rejected the plaintiffs' interpretation of the permit issuance criterion in the context of mitigation:

> [T]he statutory language does not suggest that an applicant must ever do more than *mitigate* the effect of its take of species. Thus, if a permit authorized the destruction of one acre of habitat that normally supports one individual member of a protected species, it would not be necessary for the applicant to create 100 acres of new habitat that would support some 100 individuals of the species, even if the particular developer could afford to do so. . . . The Service's view of the statutory language as requiring that the level of *mitigation* must be "rationally related to the level of take under the plan" is entirely reasonable and avoids absurd results. . . . Using this construction of the statute, the Service made a finding that "the level of *mitigation* provided for in the [Plan] more than *compensates* for the impacts of take that will occur under the plan." (AR 7140.) Based on such a finding, the Service was under no obligation to inquire whether additional *mitigation* was financially possible. All that was reasonably required to *mitigate* had been included in the Plan.

NWF, 306 F.Supp.2d at 928–29 (emphasis added). The *NWF* court's ruling and approval of a "rationally related to the level of take" standard was directed at and applied to *compensatory*

[15] NWF, 306 F.Supp.2d at 921.
[16] NWF, 306 F.Supp.2d at 922.

mitigation, not to *minimization*. Subsequent court decisions considering this standard all relate to *mitigation* only.[17]

The *NWF* court's approach to what is practicable *mitigation* does not make sense in the context of *minimization* and does not support its use in that context. FWS guidance states,[18]

> [T]he impacts of the proposed project, including the HCP, which were not eliminated through informal negotiation ***must be minimized to the maximum extent practicable and those remaining impacts that cannot be further minimized must be mitigated to the maximum extent practicable.*** These standards are based in a biological determination of the impacts of the project as proposed, *what would further minimize those impacts, and then what would biologically mitigate or compensate for those remaining biological impacts.*

A particular amount of mitigation can logically be deemed adequate if it compensates for the "unavoidable" impact remaining *after* minimization. The agency's "commensurate" approach for selecting a *minimization* strategy has no such goalposts. For example, is a strategy that allows a take of 200 Indiana bats "good enough" for that level of impact? How about a minimization strategy that allows a take of 1000 Indiana bats, or 10 Indiana bats? The effect of such taking on the overall Indiana bat population cannot provide the answer: population-level effects often do not show up until take is quite extensive.[19] There is no principle that the agency has pointed to that can guide the agency's discretion in applying a "commensurate" approach to the minimization requirement in § 1539(a)(2)(B)(ii).

E. Adaptive Management Cannot Be Used to Delay Applying the Minimizing Strategy.

The Applicant and agency cannot rely on adaptive management to satisfy the minimization requirement in § 1539(a)(2)(B)(ii), especially where measures reasonably expected to significantly further reduce take are immediately available. The agency's response to our prior comments seems to suggest that the proposed strategy is sufficient in part because cut-in speed will be increased if the proposed take limit is exceeded. This plan does not satisfy § 1539(a)(2)(B)(ii) and cannot make up for selecting a strategy that is, at best, the second most effective minimization measure, for two reasons.

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[17] See, e.g., Wildearth Guardians v. USFWS, 622 F.Supp.2d 1155 (D. Utah 2009).
[18] FWS, *Wind Energy Project Guidance*, p. 47 (emphasis added).
[19] Population-level impacts are linked to the ITP/HCP issuance criterion in 16 U.S.C. 1539(a)(2)(B)(iv): "the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild."

First, the take limit that serves as the threshold or trigger for implementing an adaptive increase in cut-in speed is itself the result of selecting an inferior option. By the time the selected threshold is exceeded, more Indiana bats will have been killed than would have been killed under the true minimizing alternative. The FHCP's proposed adaptive management plan thus risks locking in the results of a non-minimizing curtailment regime as a threshold for adaptive management for the entire term of the permit.

Second, a foundational feature of an adaptive management plan is that adaptive management cannot substitute for a showing of reasonable certainty that substantive criteria will be met.[20] Specifically, adaptive management cannot use uncertainty as a justification for holding back measures that are reasonably indicated by the best available science to minimize the impact of take. This view is supported by *Greater Yellowstone Coalition, Inc. v. Servheen*, 665 F.3d 1015 (9th Cir. 2011). In *Greater Yellowstone*, the Court addressed the agency's plan to remove the grizzly bear population from the threatened species list in the face of substantial uncertainties about the impact of whitebark pine declines. The agency decided to rely on monitoring and adaptive management rather than ensure that the applicable ESA standards were satisfied. The Court stated, "Just as it is not enough simply to invoke 'scientific uncertainty' to justify an agency action, it is not enough to invoke 'adaptive management' as an answer to scientific uncertainty." *Id.* at 1028–29.

A proposal to hold back a significantly more effective strategy unless or until a less-effective strategy does not work as expected is inconsistent with § 1539(a)(2)(B)(ii). Yet this is what the FHCP is proposing if our requested "all-turbines 6.5 m/s cut-in speed" alternative is indeed significantly more effective than the proposed strategy. The FHCP must implement what the current best available science reasonably indicates is the most effective yet practicable alternative – which is likely to be our requested alternative – and work from there. If monitoring or experimentation then shows that cut-in speeds lower than 6.5 m/s can produce a statistically equivalent reduction in take, this *new* information might then be used to amend the minimizing strategy in the future. This is the *proper* use of adaptive management in the ITP/HCP context.

[20] J. B. Ruhl & R. Fischman, *Adaptive Management in the Courts*, 95 Minn. L.Rev. 424, 472 (2010).

COMMENT 2. THE AGENCY'S "COMMENSURATE" APPROACH TO MINIMIZATION HAS LED THE FWS TO IGNORE A REASONABLE ALTERNATIVE IN THE FEIS, THUS VIOLATING NEPA.

An agency issuing an EIS must "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14(a). "The existence of a viable but unexamined alternative renders an environmental impact statement inadequate." *Morongo Band of Mission Indians v. Fed. Aviation Admin.*, 161 F.3d 569, 575 (9th Cir. 1998) (internal quotations and citations omitted). Although the agency is not required to undertake a separate analysis of alternatives that are not "significantly distinguishable" from alternatives actually considered, or that have "substantially similar consequences," *Westlands Water District v. Dep't of Interior*, 376 F.3d 853, 868 (9th Cir. 2004), a "reasonable" alternative that the available science indicates may be significantly more effective than other alternatives must at least be considered. *See Meister v. U.S. Dept. of Agriculture*, 623 F.3d 363, 377–79 (6th Cir. 2010) (ruling that under NEPA an alternative to recommended courses of action within the ambit of an existing standard generally may not be abandoned without any consideration whatsoever).

The FEIS identifies seven alternatives as follows: (1) No Action; (2) Applicant's Proposed Action Alternative (varied curtailment based on turbine risk category); (3) Maximally Restricted Operations Alternative (full turbine curtailment at night from April 1 through October 31); (4) Minimally Restricted Operations Alternative (full turbine curtailment at night with 5.0 m/s cut-in speed from August 1 through October 31); (5) Fewer Turbines; (6) Other Locations in Western Ohio; (7) ITP of Shorter Duration (< 30 years). The latter three of these alternatives were eliminated from further analysis.

The operational alternative we requested in our prior comments – *i.e.*, 6.5 m/s cut-in speed over all turbines – is likely to be significantly more effective for reducing Indiana bat turbine-related mortality than the proposed operational strategy based on the "commensurate" approach. Our alternative is thus "reasonable" and likely to be significantly distinguishable from the proposed strategy. As discussed above in Comment 1, the FWS did not consider our requested alternative because the agency applied the "commensurate" approach to the ESA minimization requirement. That approach essentially tells the agency to stop considering more

effective practicable alternatives so long as the proposed strategy is good enough for the amount of take predicted. The Applicant and agency skipped over any other cut-in speed alternative that might be practicable *and* more effective and instead pitted the proposed strategy against a "Maximally Restricted Operations Alternative" of nightly turbine shutdown. This very restrictive alternative had no chance of being selected because as the FHCP states, "this alternative did not meet the purpose and need of the Project to generate ample clean and renewable energy and allow for an economically viable Project."[21] The selection of alternatives in the FEIS is thus rigged to leave the Applicant's proposed strategy based on the "commensurate" approach as the only viable choice. The agency has violated NEPA by refusing to consider our requested operational alternative. *See, e.g.*, *Meister*, 623 F.3d at 377–79.

The agency's refusal to consider our potentially more effective alternative has implications for non-listed bats as well as for Indiana bats. In the Fowler Ridge draft EIS, for example, a 6.5 m/s cut-in speed alternative is predicted to reduce annual mortality of non-listed bats to about half of the mortality associated with the 5.0 m/s cut-in speed alternative – from 8,365 fatalities/year at 5.0 m/s down to 4,575 fatalities/year at 6.5 m/s, at full turbine build-out.[22] Thus, by failing to consider our requested alternative in the EIS, the FWS is potentially missing a significant opportunity to ameliorate turbine-related fatalities of non-listed bats at this Project. The FEIS consequently fails to fully inform the decision maker and this failure violates NEPA.

COMMENT 3. THE AGENCY CANNOT BALANCE TAKE OF INDIANA BATS WITH FUTURE CARBON EMMISION BENEFITS OF WIND POWER TO SATISFY § 1539(a)(2)(B)(ii).

The FHCP sets forth two biological goals for the Buckeye Project: first, "to minimize take of Indiana bats to the maximum extent practicable," and second, "to promote the health and viability of Indiana bat populations both locally and in the Midwest Recovery Unit."[23] The FHCP then sets forth four objectives that are claimed to be components or measurable targets needed to achieve these biological goals. The fourth objective states as follows:[24]

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[21] See FHCP, Section 2.7.2.3, p. 34.
[22] *See* Fowler Ridge Wind Farm Draft EIS (March 2013), Table 5.2, p. 110. We are forced to reference the Fowler Ridge draft EIS's because the Buckeye FEIS and FHCP do not contain such analyses of the 6.5 m/s cut-in speed.
[23] FHCP, p. 9.
[24] FHCP, pp. 9–10 (emphasis added).

> Objective 4: *Maximize operational output of the project, such that the environmental benefits of wind energy are maximized, thereby reducing potentially harmful effects of other energy products.* In particular, increased generation from wind energy facilities will offset carbon emissions from other electric generation technologies. Carbon emissions contribute to global climate change, which has been identified as a *potential risk* to Indiana bats (USFWS 2007). Other environmental benefits are also associated with wind energy (see Section 1.3.1 – Fossil Fuel Offsets and Reductions, and Section 5.4 – Potential Beneficial Effects of Wind Energy on Indiana bats).

Emphasis added. We claimed in our prior comments on the draft HCP that no evidence was presented that this fourth stated objective – to "maximize operational output of the [Buckeye] project" – would promote or satisfy in particular the first goal of minimizing take of Indiana bats to the maximum extent practicable. The agency's response shows that it disagrees. We maintain our original position in the face of the agency's response, however.

The mismatch of the fourth objective with the first goal of the HCP[25] is important because the agency does not consider alternatives – such as our "all-turbines 6.5 m/s cut-in speed" alternative – that it deems do not meet the stated goals and objectives of the HCP. The HCP states that the goals of the HCP are the "rationale behind minimization and mitigation strategies," and the objectives are "measurable targets" to achieve the goals.[26]

Based on the FHCP's stated goals and objectives, it appears that the Applicant and the agency surmise the following causal chain: if we (1) "maximize operational output of the project," we will in turn (2) maximize "the environmental benefits of wind energy," which will in turn (3) "reduc[e] potentially harmful effects of other energy products," which will achieve the dual goal (4) "to minimize take of Indiana bats to the maximum extent practicable," and (5) "to promote the health and viability of Indiana bat populations both locally and in the Midwest Recovery Unit." The FHCP presents *no* evidence to support this causal chain.

First, the FHCP fails to explain how it will be possible to simultaneously minimize take and maximize power output. FWS must ensure that the biological goals and objectives are consistent with conservation actions needed to adequately minimize and mitigate impacts to the covered species to the maximum extent practicable. However, the FHCP's claim that the

[25] The first objective – essentially to implement the proposed curtailment strategy – also does not comport with the goal of minimizing the impact of take to the maximum extent practicable, as discussed in Comment 1.
[26] FHCP, p. 8; see also USFWS, HCP 5-Point Policy, 65 Fed. Reg. 35242 (June 1, 2000).

objective to "maximize operational output" of the Project will achieve the biological goal to "minimize take of Indiana bats to the maximum extent practicable" is untenable.

Specifically, it is reasonable to suppose that operational output of the Project generally increases with the number of turbines spinning, the length of time the blades are spinning (both seasonally and daily), and the speed at which those blades spin. For example, keeping a cut-in speed at 3.5 m/s would increase operational output relative to higher cut-in speeds. It is also reasonable to suppose that the risk of bat mortality generally increases with more turbines spinning, for longer periods and at faster speeds. Thus, maximizing output of the Project seems to preclude, or at least conflict with, minimizing take of Indiana bats. It may be logical to say, in contrast, that one is attempting to maximize power output *subject to* the constraint of minimizing take, but that is not what the FHCP is claiming to do. The fourth objective creates a conflict with the first biological goal at the very least.

Second, the agency's claim in its response that the Buckeye Project itself will have a positive effect on climate change and on Indiana bats is not credible. The agency's response does some vigorous hand waving about the benefits of moving from coal-generated power to a renewable energy portfolio and points to the FHCP's Section 1.3.1 (Fossil Fuel Offsets and Reductions) and Section 5.4 (Potential Beneficial Effects of Wind Energy on Indiana Bats). The agency's response states in relevant part as follows:

> Itemized Comment Number 0030-5
>
> The commenter claims three major flaws associated with the fourth objective. First, the commenter claims that the link between maximizing operational output of the Project and "maximizing the environmental benefits of wind energy" or "reducing potentially harmful effects of other energy projects" is entirely unsupported conjecture. Section 1.3.1 of the HCP (Fossil Fuel Offsets and Reductions) provides evidence of the link. While it is true that the amount of offset depends on various economic and political factors, *it is certainly reasonable to maintain that energy generated by wind energy facilities will necessarily offset energy generated from other sources.* Table 1-2 of the HCP provides a reasonable estimate of the amount of offset, considering the generation mix most likely to be offset (based on the generation mix in Ohio, which is primarily coal-fueled).
> * * *
> Third, it is stated that, "the HCP presents no evidence that maximizing operational output meets the stated goal of minimizing take of Indiana bats to the "maximum

> extent practicable" and promoting the health and viability of Indiana bat populations." *The objective recognizes that the greater the wind energy output, the greater the offset of other energy generation sources*, and therefore, maximization of the potential beneficial effects of wind energy on Indiana bats as described in HCP Section 5.4. *Increased output of wind energy promotes the health of Indiana bat populations by reducing the potentially harmful effects of emissions associated with other energy generation technologies.* The fourth draft objective is supported by best available science and reasonable assertions based on known biological effects of carbon emissions.

Emphasis added.

The agency's response does not rebut our comment that maximizing operational output of the Project does not lead to minimizing take of Indiana bats. Although the agency states, "it is certainly reasonable to maintain that energy generated by wind energy facilities will necessarily offset energy generated from other sources," nothing in the FHCP or the FEIS or the tables and sections referenced in the response shows or even suggests that increased power output *from the Buckeye facility* would reduce the carbon emissions from other energy sources in Ohio. Such a claim would require that one megawatt of Ohio coal-produced power will be taken permanently offline in exchange for each megawatt of power produced by the Buckeye Project. Absolutely no evidence is presented that this will occur. Thus, this causal link is just speculation.

Even if the aforementioned offset of coal-fired power generation did occur for the Buckeye Project, nothing referenced in the FHCP or FEIS shows that such an offset would slow or ameliorate environmental changes that may occur in Ohio or the Midwest region due to carbon emissions. No evidence is presented of a relationship between reducing carbon emissions in Ohio specifically and any climate-related habitat changes in recovery units of the Indiana bat.

In fact, according to FWS's own research and publications, current climate and species modeling cannot support a species-specific analysis to assess the impacts of greenhouse gas emitters on species take, and by the same reasoning, the models cannot support a species-specific analysis to assess the benefits of decreased emissions attributable to actions such as wind power facilities. The court in *In re Polar Bear Endangered Species Act Listing and § 4(d) Rule Litigation*, 818 F.Supp.2d 214 (D.D.C. 2011), agreed with the FWS's position that the best available science does not allow the agency to draw a causal link between greenhouse gas emissions from a particular facility and take of a species. The court stated,

The Service further explained in response to comments that "[t]here is currently no way to determine how the emissions from a specific action both influence climate change and then subsequently affect specific listed species, including polar bears." AR4D 12942. In other words, because climate modeling does not currently allow the agency to draw a causal connection between the greenhouse gas emissions from a specific source and the impact on a particular polar bear, the Service determined that it cannot identify when a "take" has occurred for the purposes of enforcing the incidental take provisions of the ESA against an individual greenhouse gas emitter. AR4D 12942 (explaining that "the future indirect impacts of individual [greenhouse gas] emitters cannot be shown to result in 'take' based on the best available science at this time.").

* * *

The administrative record amply supports the Service's conclusion. In a memorandum summarizing the most recent findings on this issue by the leading international climate science research organizations, the United States Geological Survey determined that "[i]t is currently beyond the scope of existing science to identify a specific source of CO2 emissions and designate it as the cause of specific climate impacts at an exact location." AR4D 14144A.02. Similarly, in a memorandum to the Service, the Environmental Protection Agency Office of Air and Radiation observed that "[t]he climate change research community has not yet developed tools specifically intended for evaluating or quantifying end-point impacts attributable to the emissions of [greenhouse gases] from a single source, and we are not aware of any scientific literature to draw from regarding the climate effects of individual, facility-level [greenhouse gas] emissions." AR4D 14336. Based on these findings, the Service Director issued a subsequent policy memorandum in which he concluded that "[t]he best scientific data available today do not allow us to draw a causal connection between [greenhouse gas] emissions from a given facility and effects posed to listed species or their habitats." AR4D 14145. The Department of the Interior has echoed these conclusions in a similar policy memorandum:

> Given the nature of the complex and independent processes active in the atmosphere and the ocean acting on [greenhouse gases], *the causal link simply cannot currently be made between emissions from a proposed action and specific effects on a listed species or its critical habitat. Specifically, science cannot say that a tiny incremental global temperature rise that might be produced by an action under consideration would manifest itself in the location of a listed species or its habitat.* Similarly, any observed climate change effect on a member of a particular listed species or its critical habitat cannot be attributed to the emissions from any particular source. Rather it would be the consequence of the collective greenhouse gas accumulation from natural sources and the world-wide anthropogenically produced [greenhouse gas] emissions since at least the beginning of the industrial revolution.

Id. at 231–32 (emphasis added). The logical corollary of the agency's position endorsed by the *In re Polar Bear* court is that a causal link simply cannot currently be made between an offset or reduction of carbon emissions due to a proposed action and specific effects on a listed species.

This same point is made by J. B. Ruhl in a recent article on wind power and the ESA:

> [T]he ESA requires that the FWS adhere to the best available science when making decisions under section 7. Applying this standard, the Agency has already concluded that the current capacity of climate and species modeling cannot support engaging in species-specific section 7 analyses to assess the harms of increased emissions attributable to actions such as new power plants. By the same reasoning, the current capacity of climate and species modeling cannot support engaging in species-specific section 7 analyses to assess the benefits of decreased emissions attributable to actions such as new wind power facilities.

J. B. Ruhl, *Harmonizing Commercial Wind Power and the Endangered Species Act through Administrative Reform*, 65 Vanderbilt Law Rev. 1769, 1790–91 (2012). Ruhl cites the following sources to support his conclusions: "U.S. Dept. of the Interior, Solicitor's Opinion M-37017, Guidance on the Applicability of the Endangered Species Act's Consultation Requirements To Proposed Actions Involving the Emissions of Greenhouse Gases 1 (2008), available at www.doi.gov/solicitor/opinions/M-37017.pdf (stating that the best available science does not support inferring the impact of climate change on any specific location); Memorandum from H. Dale Hall, FWS Dir., to FWS Reg'l Dirs., Expectations for Consultations on Actions that Would Emit Greenhouse Gases 1 (May 14, 2008), available at www.fws.gov/policy/m0331.pdf (stating the belief of the FWS that greenhouse gas emissions alone will not trigger section 7 review of an agency's action because 'the best available science does not allow us to draw a causal connection between GHG emissions from a given facility and effects posed to listed species or their habitats'); Memorandum from Mark Myers, supra note 104 (highlighting the difficulty in scaling down global climate change models to the local level)." According to Ruhl, the FWS under the Obama Administration has not wavered from this position staked out during the Bush administration.

Moreover, the long time scale of the relationship between carbon emissions and climate change effects casts serious doubt on the ability to rely on the "wind power effect" at a particular wind facility to minimize or mitigate take or to benefit Indiana bats. As Ruhl points out,[27]

> The climate change benefits of the wind power effect will inure to species in the future, perhaps the very distant future, as today's decreased emissions slowly work their way through the climate system, whereas the harms of wind power infrastructure are more immediate. Wisely, the FWS does not seem eager to make the case that it can reliably quantify and weigh that temporal tradeoff[.]

Looking at the Applicant's and agency's claims in a light most favorable to the FHCP, Section 1.3.1 (Fossil Fuel Offsets and Reductions) and Section 5.4 (Potential Beneficial Effects of Wind Energy on Indiana bats) show only the following: if one megawatt of Ohio coal-produced power is taken permanently offline in exchange for each megawatt of power produced by the Buckeye wind farm, then the amount of carbon emissions due to power generation in Ohio might decrease; if the amount of carbon emissions due to power generation in Ohio decreases, overall global climate change *might* be slowed or ameliorated, critically depending on what other states and countries do to curb emissions; and slowing or ameliorating global climate change *might* reduce risks to Indiana bats in the relatively distant future.

Contrary to FWS's claims in its responses to our prior comments, no evidence is presented in the FHCP that the fourth stated objective – to "maximize operational output of the [Buckeye] project" – would promote or satisfy the first goal of minimizing take of Indiana bats to the maximum extent practicable. Furthermore, there is no evidence presented that the fourth objective would have any measureable impact on Indiana bats in Ohio or the Midwest recovery unit, which would be necessary for achieving the second biological goal ("to promote the health and viability of Indiana bat populations both locally and in the Midwest Recovery Unit").

What the agency has done is to use the relationship between an aspirational *renewable energy policy* and potential future climate change benefits to justify allowing increased take of Indiana bats from a specific facility simply because that facility is *consistent with* that energy policy. There is absolutely no evidence that the Project itself will benefit Indiana bats. It is arbitrary and capricious to allow an actual cause of take of a listed species to increase based on

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[27] J. B. Ruhl, *Harmonizing Commercial Wind Power and the Endangered Species Act through Administrative Reform*, 65 Vanderbilt Law Rev. at 1791.

the FWS's unsupported claims. FWS knows that Indiana Bats are at risk of harm from the Buckeye turbines. FWS does not know, however, that the bats would benefit from maximizing the output of the Buckeye facility.

Accordingly, we maintain that Objective 4 in the FHCP – to maximize operational output of the Buckeye Project – is an invalid objective for achieving the goal of minimizing take of Indiana bats to the maximum extent practicable. Objective 4 also is a highly speculative method for achieving the goal of promoting the health and viability of Indiana bat populations in the Midwest recovery unit, and the results of such method are in any event unmeasurable according to the FWS's prior representations.

Thank you for considering our comments.

Respectfully,

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Attachment 2. 20130520 UNU comments on Final EIS

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By Electronic Filing

May 20, 2013

Ms. Megan Seymour
U.S. Fish and Wildlife Service
Ohio Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230

Re: Final Environmental Impact Statement for the proposed HCP and ITP, Buckeye Wind Power Project, Champaign County, OH
Docket No. FWS-R3-ES-2012-0036

Dear Ms. Seymour:

On behalf of Union Neighbors United ("UNU"), Robert and Diane McConnell, and Julia Johnson (collectively the "UNU Commenters"), I offer these comments in response to the U.S. Fish and Wildlife Service's Final Environmental Impact Statement for a proposed Habitat Conservation Plan and Incidental Take Permit for the Buckeye Wind Power Project, Champaign County, Ohio. Notice of availability of the final EIS was published in the Federal Register on April 19, 2013 (78 Fed. Reg. 23586).

On March 10, 2010, the UNU Commenters submitted detailed comments pertaining to NEPA scoping for this proposed action. Thereafter, on June 25, 2010, the UNU Commenters submitted further comments concerning the content of the Draft EIS in response to the USFWS's Federal Register notice of May 26, 2010. On September 27, 2012, the UNU Commenters offered comments on the Draft EIS for this project. All of those comments are adopted and incorporated by reference for purposes of these comments on the Final EIS.

These comments also adopt and incorporate by reference the comments of the Conservation Law Center ("CLC") on the Draft and Final EIS filed in this matter on

September 26, 2012 and May 17, 2013 respectively. In addition to the CLC's comments, I offer the following comments on the Final EIS:

1) **Issuance of a thirty-year ITP will violate the ESA:**

In their comments on the Draft EIS, the UNU Commenters pointed out that Buckeye Wind is not entitled to a thirty-year ITP when the proposed project has an operational life of only twenty-five years. The Service does not dispute that the project has an operational life of only twenty-five years. Final EIS Appendix K, Section 2, Response to Comment 0089-17. The Service also concedes that "it is not anticipated that any activities associated with construction, maintenance, and decommissioning will rise to the level of take." *Id.* Nonetheless, the Service intends to grant Buckeye Wind thirty years of "take coverage for construction, maintenance, and decommissioning activities . . . even though the operating life of the Project is 25 years" because "there is a possibility that harm or harassment could occur from disturbance or displacement." *Id.*

This approach violates the Endangered Species Act (ESA) on several grounds. First, the Service is poised to cover activities outside the operational life of the Project based solely on a speculative "possibility that harm or harassment could occur" from those activities. If, as the Service states, it is not anticipated that any activities associated with construction, maintenance, and decommissioning will rise to the level of take, then there is no factual basis to grant an ITP covering those activities.

This is especially the case where the annual take authorization is not based on the speculative risk posed by construction, maintenance, and decommissioning. Rather, the annual take limit was derived solely from modeling of impacts from turbine operation, during which time the risk of harm to bats is indisputable. Since such modeling does not take into account the insignificant risk of construction, maintenance, and decommissioning, the modeling (and the annual take estimates which rely on that modeling) grossly overstate the risk of take during the five-year period that such activities will occur. Thus, the record does not show that the Applicant will minimize, to the maximum extent practicable, the take of Indiana bats during the five years of construction, maintenance, and decommissioning.

2) **The Service has refused to consider alternatives that it deemed reasonable in the context of a proposed wind energy project ten miles distant from the Buckeye Wind project.**

On September 26, 2008, the Service wrote to wind developer Babcock & Brown offering opinions concerning the risk of take of Indiana bats associated with a proposed wind energy facility in Logan County, Ohio. (See Exhibit 9 attached to the UNU Commenters'

comments on the Buckeye Wind Draft EIS.) The area proposed for the Babcock & Brown project was fewer than ten miles from the present northern boundary of the Buckeye Wind project. In its letter to Babcock & Brown, the Service recommended that the developer consider a range of measures to minimize the project's impact on the Indiana bat, including the following:

- No clearing of forest cover for turbines or supporting infrastructure, including access roads; and

- Use of phased-in approach to project development. For example, construct and operate 1/5 of total planned turbines with post-construction mortality surveys conducted at all turbines for the first 2 years.

U.S. Fish & Wildlife Service, *Draft Recommendations for Logan County Wind Energy Project* (9/28/08).

In their comments on the Draft EIS for Buckeye Wind, the UNU Commenters urged the Service to consider these minimization alternatives identified by the Service's own staff. Nonetheless, the Service has refused to consider either alternative in the context of the Buckeye Wind project.

The Service rejects consideration of the phased approach to project development "because that is not how the proposed Project is defined." Final EIS Appendix K, Section 2, Response to Comment 0089-10. The Service observes that other wind projects such as Beech Ridge "may include an alternative with several phases of development because their project has already constructed the first phase, and the second phase may or may not ultimately be developed." *Id.*

This reasoning misses the mark in several respects. It is a fundamental tenet of NEPA that an EIS must address reasonable alternatives to the proposed action. 42 U.S.C. § 4332(2)(C)(iii); *City of Carmel-By-The-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1154 (9th Cir. 1997). The range of project alternatives to be considered derives from the Purpose and Need section of the EIS. 40 C.F.R. § 1502.13; *Carmel-By-The-Sea*, 123 F.3d at 1154. In other words, "the stated goal of a project necessarily dictates the range of 'reasonable' alternatives." *Id.* However, the Purpose and Need section of the Buckeye Wind EIS does not speak to whether the project is to be phased, or whether it can be phased.[1] Final EIS at 1-5. Therefore, nothing in the Service's defined purpose and need

[1] Actually, while it is not addressed in the Purpose and Need statement, the Buckeye Wind project has in fact been permitted in two phases. Final EIS at 1-13.

of the project precludes the consideration of a phased approach to development of the project.

It would be contrary to NEPA for the Service to narrow the range of alternatives to only those that are consistent with the developer's objectives, rather than the Service's goals as defined in the Purpose and Need section. *See Anglers of the Au Sable v. U.S. Forest Service*, 565 F. Supp. 2d 812, 833 (E.D. Mich. 2008). Thus, in the case of Babcock & Brown, it was the Service—not the developer--who proposed that the Logan County wind project be developed in phases. In recommending minimization measures in that case, the Service properly did not allow itself to be constrained by the developer's definition of the project.

The Service offers no rationale whatsoever for rejecting consideration of a ban on forest clearing, other than to state that Buckeye Wind proposes to impact no more than 16.8 acres of trees. *Id.*

For all of these reasons, the Service has omitted consideration of reasonable take minimization alternatives in violation of NEPA. Moreover, absent consideration of these alternatives, the Service cannot conclude that the Applicant has met its obligation under the ESA to minimize take to the maximum extent practicable. The UNU Commenters respectfully urge the Service to address these deficiencies in the Final EIS and HCP.

3. Consideration of the Buckeye Wind HCP must be coordinated with the Midwest Wind Multi-Species HCP.

In their comments on the Draft EIS, the UNU Commenters pointed out that NEPA requires consideration of both the Buckeye Wind HCP/ITP and the Midwest Wind Multi-Species HCP in a single programmatic EIS in order adequately to consider the cumulative environmental impacts on the Midwest region. The Service has declined to do so, citing several reasons. For example, the Service states that the Buckeye Wind project is not proposed for the same region as the Multi-State HCP. The UNU Commenters do not understand the Service's reasoning, since the Buckeye Wind project is proposed for western Ohio and the Service acknowledges that the Buckeye Wind project will be considered in the baseline of the Multi-State HCP. Buckeye Wind Final EIS at Appendix K, Section 2, Response to Comment 0089-2. Moreover, the Buckeye Wind EIS addresses potential impacts in Ohio, Indiana, and Michigan—three states included in the Multi-State HCP.

As pointed out in the UNU comments on the Draft EIS, the CEQ regulations specifically contemplate the consolidation of NEPA review of multiple proposals where those

proposals can be grouped geographically (including actions occurring in the same general location, such as watershed or region), or generically (including actions which have relevant similarities such as common timing, impacts, alternatives, methods of implementation, or subject matter). 40 C.F.R. § 1502.4(c). The Buckeye Wind HCP and the Multi-Species HCP both meet those criteria. Furthermore, the Department of Interior's Department Manual states:

> If proposed actions are planned for the same geographic area or are otherwise closely related, environmental analysis should be integrated to ensure adequate consideration of resource use interactions, to reduce resource conflicts, to establish baseline data, to monitor and evaluate changes in such data, to adapt actions or groups of actions accordingly, and to comply with NEPA and the CEQ Regulations.

516 DM 1.5(A)(3).

The Service explains that although it does not intend to consider the Buckeye Wind HCP and the Multi-Species HCP as part of a programmatic EIS, the Multi-Species HCP and EIS "will have to address all *existing* wind farms, including the Buckeye Wind Project, as part of the baseline conditions. Buckeye Wind Final EIS at Appendix K, Section 2, Response to Comment 0089-2 (emphasis added). However, it is inaccurate to characterize the Buckeye Wind project as an "existing wind farm," since it is still in the NEPA/ESA approval process and not one turbine has been constructed to date. Thus, since the Buckeye Wind project is undergoing NEPA review concurrently with the Multi-Species HCP, the Service cannot avoid the need for coordinated review of those proposals by inaccurately characterizing Buckeye Wind as an "existing" facility.

It is apparent from numerous comments in this matter that there is currently little standardization or uniformity in the Service's approach to reviewing HCPs and EISs for individual wind energy facilities, as evidenced by the varying approaches and ranges of alternatives expressed in at least three pending EISs for individual wind projects. It is hoped that a regional HCP will introduce some uniformity and consistency to the process of approving wind ITP applications. In the meantime, the UNU Commenters urge the Service to impose some standardization and consistency in its review of individual wind ITPs/HCPs so that they are consistent with the Multi-Species HCP when that process is

finalized. Otherwise, the Service may find its Multi-Species HCP constrained by precedents established in the Service's concurrent approvals of individual wind projects.

Thank you for the opportunity to comment on this important matter. If you have questions about any of the information in this letter, please contact me at (937) 226-9000. Furthermore, please notify me of future developments in the Service's review of this matter, including the issuance of any Biological Opinion.

Respectfully submitted,

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